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REMARKS

The present response is to the Office Action mailed in the above-referenced case on July 17, 2003. Claims 1-4, 7-9 and 13-17 are pending for examination. The Examiner has objected to claim 1 due to informalities. Claims 1, 4, 7-9 and 13-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite. Claims 1, 4, 7-9 and 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goodman (U.S. 5,844,596), hereinafter Goodman, in view of Eames et al. (U.S. 6,317,884), hereinafter Eames.

Regarding the Examiner's objection to claim 1 due to informalities, applicant believes the Examiner is referring to claim 1 in error, as claim 1 does not recite "translating converting". However, claim 7 does recite the objectionable language, and applicant will assume that it is claim 7 to which the Examiner refers. In response, applicant herein amends the language of claim 7 to correct the objectionable language.

Regarding the Examiner's 112 rejection of claims 1, 4, 7-9 and 13-17, applicant herein further amends claim 1 to replace the phrase "the signals" in line 11 of the claim, to "the public network protocol signals". Further to the above, applicant herein amends the language of claim 7 replacing "the level" in line 5, with the phrase "a level".

Regarding the merit rejections of applicant's claims, applicant herein provides arguments to more particularly point out the subject matter of applicant's invention regarded as inventive, and herein judicially amends the base claims supporting said arguments provided by applicant. Applicant herein amends the language of claim 1 to specifically recite a bridge adapter at the home or business site having an inlet port for receiving public that were protocol signals,

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characterized in that the bridge adapter unit drives the telephone wiring structure according to a Local Area Network (LAN) protocol, translates all received public network protocol signals, regardless of the protocol, to the single LAN protocol. For convenience, applicant reproduces claim 1 below as herein amended.

Claim 1 as amended now recites:

1. (Currently Amended) A networking system for a home or business site, comprising:

a bridge adapter unit at the home or business site, having an inlet port for receiving public network protocol signals; and

a telephone wiring structure in the site, the wiring structure having multiple end points and one or more junctions, and connected at a single point to an outlet port of the bridge adapter unit;

characterized in that the bridge adapter unit drives the telephone wiring structure according to a Local Area Network (LAN) protocol, translates all received public network protocol signals, regardless of protocol, to the single LAN protocol, and modulates the signals in a manner to correct signal variations at the end points due to having multiple end points driven from a single point at the bridge adapter unit.

Claim 7 is applicant's method claim for implementing a networking system in accordance with claim 1. Applicant herein accordingly amends the language of claim 7 to coincide with the clarified limitations of claim 1 as amended.

Applicant now wishes to direct the Examiner's attention to Fig. 3 of applicant's specification, wherein the unique home or business site networking

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system is illustrated in exemplary form. Site 300 represents the home or business site in which applicant's invention is practiced.

Firstly, applicant will use some elements of Fig. 3 to explain a conventional example of a networking system, over which applicant's invention as claimed provides many distinct advantages, as will be further detailed below. In the prior art, signals of various public network protocols are transported from element 342 to the home or business site 300, via a standard signal drop line 320. The drop line typically terminates at a junction box at the foundation of the building, or somewhere in close proximity thereabout, accessible for testing or repairing the phone lines, broadband coaxial cabling, or whatever type of drop wiring is utilized, or is networked to various appliances, etc. within the site.

Inside most residential and commercial buildings their typically exists a network of copper telephone wiring extending under the foundation, within walls, and so on, the end points of the wiring terminating at phone jacks enabling connection of telephones, computer modems, fax machines, etc.. Such telephone wiring in the site is typically a tree-structure type arrangement network whereby extensions to the wiring of the network may be made at any point in the tree-structured wiring in order to create additional phone lines leading to other points in the building for connecting additional appliances, such as additional telephones, and so on. Wiring structures 302 a-d of Fig. 3, all leading from a single outlet port of bridge adapter unit 301, represent such a tree-type wiring structure.

Referring now to applicant's instant invention and specification, particularly to Fig. 3, the distinct and patentable aspect of applicant's invention is the capability for utilizing the existing tree-type telephone wiring network already existing and installed within a residential or commercial site, and driving the standard telephone wiring network according to the single LAN protocol, thereby eliminating the need for installing, not only the additional appliances, but also the

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required wiring and cabling, such as coaxial, twisted copper wiring, or other known wiring types, and installation of multiple junction boxes, coaxial splitter apparatus, or other such junction interfaces for accommodating the different protocols required of the connected appliances within the site.

Referring again to applicant's Fig. 3, interface boxes 305 a-d, are connected at individual ones of the end points of wiring 302 provided for converting the LAN signals of the telephone wiring network to the protocol required by the connected device or appliance within the site. For example, for fax machine 307, public network protocol telephone signals are transported to the inlet port of bridge adapter unit 301 via drop line 320, and control routines executing within bridge adapter unit 301 convert the public network protocol of the telephone signals to a single LAN protocol, such as Ethernet, and conversion box 305a receives the LAN signals and convert the signals back to the protocol required by the fax machine. Those devices already LAN compatible, such as computers 303 and 310, may connect directly to the telephone wiring structure without requiring additional interface conversion circuitry.

The heart of applicant's invention, and the key distinction over the prior art is that bridge adapter unit 301 accepts any signal transported to the site, regardless of the signal protocol, and drives those signals according to a single LAN protocol onto the pre-existing internal tree-type wiring structure within the building, and where required, converts said signals from the LAN protocol to a different protocol, depending on the protocol requirement of the connected devices or appliances.

The reference of Eames clearly does not teach or suggest the use of internal telephone wiring already existing within the residential or commercial building to serve as the single LAN network for driving signals of the single LAN protocol throughout the site, for connecting a variety of devices or appliances

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regardless of their protocol requirements. Referring now to Fig. 2 of Eames, it is clearly shown that Eames utilizes a variety of interface units, splitters, different types of drop wiring leading to the site 190, and different types of cabling requiring different protocols, within site 190 for creating the internal network for connecting the various appliances.

Eames discloses a residential Gateway 200, and according to the Examiner's statements in the instant Office Action, the Examiner equates this residential Gateway 200 with applicant's bridge adapter unit 301. Applicant argues however, that the Examiner's interpretation of the functionality and capabilities of Gateway 200 as reading on applicant's unique bridge adapter unit 301 is improper. It is clear in the teaching of Eames that the signals distributed within the internal network of site 190 still require more than a single protocol, as is taught in applicant's invention. For example, drop line 170 is coaxial cabling transporting broadband signals from broadband interface unit 150 of optical network unit 140. Cabling 171 within site 190 is an extension of said coaxial broadband cabling, leading to Gateway 200. Gateway 200 then transports the broadband signals to a splitter 177 via connection 210, then distributes the broadband signals to various in-home devices requiring broadband signal protocol.

Broadband signals transported to Gateway 200 via coaxial cabling 171 may also be converted to other protocols required by such connected device is as computer 193, telephone 194, or TV 199, which is taught to be S-video compatible requiring a four-conductor S-video cable for transporting the signals to TV 199. Further, Plain Old Telephony (POTS) telephone signals are transported to building site 190 via separate twisted pair telephone wiring 180 leading from telephone interface unit 145 of optical network unit 140. Network interface device 183 provides for high-voltage protection and serves as the interface and

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demarcation point between the twisted wire pair drop cable 180 and the end-home twisted pair wiring 181. Is clear in figures 1, 2 and 3 of Eames, and the accompanying descriptions in the specification, that the signals of various protocols transported to the residential site 190 are distributed within the internal network of the site in their original public network protocol as received to the site, not distributed according to a single LAN protocol, such as Ethernet, as is taught and claimed in applicant's invention.

Applicant argues that, if one were to install the system of Eames in a residential or commercial building, for example, it would be required to also install the various different types of cabling and wiring, such as coaxial cabling 171, or any other type of wiring, other than the existing telephone wiring in the building. In applicant's invention it is only required that a single bridge adapter unit 301 be installed at the building site for converting all of the incoming signals of various protocols to a single LAN protocol to be driven over the existing telephone wiring within the building, and if needed, signal conversion interfaces such as 305a-b for converting the LAN signals back to a different protocol required by any devices not LAN protocol compatible.

Applicant's invention provides a single interface unit, accepting all incoming signals, regardless of their protocol, converting all the incoming signals to a single LAN protocol, and driving the signals according to the LAN protocol throughout the internal network of the building site utilizing only a single type of wiring, namely the copper telephone wiring pre-existing within the building site. The clear and distinct advantage provided over the prior art references provided by the Examiner is that extensions to the network wiring may be easily and economically accomplished by simply splicing the wire extensions, which can be done at any point in the tree-structure of the network wiring, in order to create

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additional phone lines leading to other points in the building for connecting additional appliances.


In view of applicant's above arguments presented above, and applicant's judicial amendments to the claims made herein, applicant strongly believes base claims 1 and 7 are clearly and unarguably patentable over the prior art, either singly or combined, as neither reference Goodman or Eames teaches or suggests all of the limitations of applicant's base claims as amended, and all of the depending claims are then patentable on their own merits, or at least a depended from a patentable claim.

As all of the claims standing for examination as argued and amended above have been shown to be patentable over the art of record, applicant respectfully requests reconsideration and that the present case be passed quickly to issue. If there are any time extensions due beyond any extension requested and paid with this amendment, such extensions are hereby requested. If there are any fees due beyond any fees paid with the present amendment, such fees are authorized to be deducted from deposit account 50-0534.

Respectfully Submitted,

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